IN THE CLAIMS:

Claims 1-20 (cancelled)

Claim 21 (previously presented): A method for detecting Gold code phase and carrier frequency in a GPS signal comprising the steps of:

collecting a multiple millisecond portion of a composite GPS signal in a GPS receiver;

partitioning the multiple millisecond portion of the composite GPS signal into one millisecond segments;

converting each one millisecond segment to the frequency domain;

multiplying each of the converted millisecond segments by a frequency representation of a Gold code corresponding to a GPS satellite in view of the receiver to generate a product;

converting each product to the time domain to obtain a correlation signal between each millisecond segment and the Gold code;

determining a location of a peak in each correlation signal;

determining a frequency of a sine wave fitting complex values at the point of each determined peak location;

adjusting at least one correlation signal in accordance with the determined frequency of the sine wave;

summing point-by-point the points of the correlations;

calculating the magnitude of the summed correlations; and

determining a peak from the calculated magnitude.

Claim 22 (previously presented): The method recited in claim 21, wherein only a few points around the estimated peak locations are chosen for processing.

Claim 23 (previously presented): The method recited in claim 21, wherein the sine wave is determined using a FFT.

Claim 24 (previously presented): The method recited in claim 21, wherein a correlation signal is adjusted through multiplication of a complex exponential having a value of the determined sine wave.

Claim 25 (cancelled).

Claim 26 (new): A method for detecting code phase and carrier frequency in a GPS signal comprising:

a. collecting a multiple millisecond portion of a GPS signal in a GPS receiver;

b. performing a coarse acquisition of a carrier frequency and code phase of the GPS signal using non-coherent processing, wherein said non-coherent processing includes:

i. partitioning the multiple millisecond portion of the GPS signal into one millisecond segments, converting each one millisecond segment to the frequency domain;

ii. multiplying each of the converted millisecond segments by a frequency representation of a Gold code corresponding to a GPS satellite in view of the GPS receiver to generate a product;

iii. converting each product to the time domain to obtain a correlation signal between each millisecond segment and the Gold code; and

iv. determining a location of a peak in each correlation signal; and

c. performing a fine acquisition of said carrier frequency and code phase of the GPS signal using coherent processing.

Claim 27 (new): The method of claim 26, wherein said performing a fine acquisition comprises using a curve fitting routine to refine the location of the peak.

Claim 28 (new): The method of claim 26, wherein said performing a fine acquisition comprises using a table lookup method.

Claim 29 (new): The method of claim 26, wherein said performing a fine acquisition comprises analyzing complex values at locations of said determined peaks.

Claim 30 (new): The method of claim 29, wherein said performing a fine acquisition comprises analyzing complex values of said determined peaks and a few points on either side of said determined peaks.

Claim 31 (new): The method of claim 26, further comprising the steps of:

pre-computing the frequency representation of the Gold code; and

storing the pre-computed frequency representation of the Gold code in memory.